



Australian Bureau of Statistics

CensusAtSchool Australia

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Resources



CaSMa09 - Who has Broadband? Comparing 2006 to Now

You can download this activity, the teacher solutions and the [assessment rubric](#) as a rich text file (RTF) at the bottom of the page. Download our printer friendly Prepared Samples as Excel files or access data using the Random Sampler.

Subject Area

Mathematics

Key Statistical Literacy Competencies Addressed

- Data awareness
- The ability to understand statistical concepts
- The ability to analyse, interpret and evaluate statistical information
- Communicating statistical information and understandings

Overview

This classroom activity involves comparing student connection to the Internet in 2006 to now. Students can determine the present day use either by conducting their own survey to collect data or by using the this year's CensusAtSchool data (using a sample of Australian students from the Random Sampler that compares common questions only). In this activity students are asked to conduct a simple analysis using graphs to describe how access to the internet has changed.

Requirements

- Computer with internet connection
- Spreadsheet software
- Calculator
- Pens and paper
- Student Worksheet

Instructions

Overview:

This classroom activity involves comparing student connection to the Internet in 2006 to now. Students can determine the present day use either by conducting their own survey to collect data or by using the current CensusAtSchool data (using a sample of Australian students from the Random Sampler that compares common questions only). In this activity students are asked to conduct a simple analysis using graphs to describe how access to the internet has changed.

Instructions:

The world of computers changes very quickly. The Internet is a good example. Viewing and uploading videos on YouTube is common now, but prior to 2006 YouTube did not exist! Most people didn't have broadband either, so even if YouTube had existed not many could have used it.

Task One: Is it true that most students did not have broadband in 2006?

You can find out using a data sample from the 2006 CensusAtSchool Random Sampler. The records of over 112,000 students are in this 2006 database.

1. Get a sample from the random sampler.

Reference year: 2006

Select questions: All

Sample size: 200

The random sample you get is an Excel spreadsheet of raw data. Question 6 asked "Can the Internet be accessed at your home?" Be careful to ensure you use the sheet with the label **2006**.

2. Count each response in your sample and record it in a table like the one below:
(Hint: It will be easier to count the number of students in each category if you use Excel SORT for the data first. If you are good at Excel it will be even easier if you use the COUNTIF function to do the counting for you)

Type of Internet Access	Number of Students	Percentage of Students
No Internet connection		

Yes - broadband connection		
Yes - dial-up connection		
Yes - other (include Internet access through mobile phone etc)		
Total		

3. Use a side by side graph to represent the data in the table above. This can be easier to understand.

4. Decide if most students had access to Broadband Internet in 2006. You can use the table or graph to help you decide. (Hint: It will be easier to count the number of students in each category if you sort the data first. If you are good at Excel it will be even easier if you use the COUNTIF function to do the counting for you).

Task Two: Do most students have broadband today?

One way to answer this question would be to collect your own data.

You could do this by conducting a survey of your own class and recording the data you collect. Use the question exactly as it is written above.

Or you could take a new sample:

Reference year Current Year

Select questions All

Sample size 200

You can use the table or side by side graph to help you decide

5. Use your data to prepare a table and side by side graph (**clearly label with the year**) similar to those you prepared for 2006 data.

6. Decide if most students have access to Broadband Internet today. Your answer will need to refer to your table or graph for reasons.

7. In what way do you think the results would be different if a sample was taken in another two years?

8. The local library is considering installing computers for use by residents in the local area. Do you think that your class results could be used to represent the people who live in your neighbourhood?

9. Describe a sample that could be taken that could better represent yours.

Extension

10. Investigate the access to broadband in your neighbourhood by viewing the latest Census Data. You can do this by using the

Community Profiles from the latest Census.

11. Investigate the trend in Internet access by using the time series 8146.0 - Household Use of Information Technology, Australian. These reports have detailed tables, a summary and highlights of the data.

12. Learn more about surveys by playing the Home Internet Survey game. You may have to turn up the magnification on your computer to view the activity clearly.

Download the Activity

Student Worksheet

RTF

Teacher Solutions

RTF

Assessment Rubric

RTF

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